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Agricultural.

CORN AND BEEF.

Few may be aware that the price of beef and pork depends largely on the price of corn. But it is a very important factor in determining prices. Sometimes a foreign demand will affect prices independent of this, but the connection between the price of beef and pork with the price of corn is so close that it may be said to constitute a rule. This is quite clearly shown by a circular just issued from the publication bureau of the department of agriculture. The rise in the price of steers in 1882 was accompanied by a rise in the price of hogs, and both appear to have been greatly influenced if not caused by the same cause. The same was evident in the price of steers in 1887, while there was a rise in the price of hogs. The decline in steers is traced to the falling off in the export trade. In 1888 the price of both beef and pork advanced—the latter more than the former—owing to an increased foreign demand. But without some special disturbance of the market, take it one year with another, the price of corn may be said to rule the price of beef and pork.—*Mirror and Mirror*.

The above is eminently true so far as pork is concerned, and was once so with beef. But the price of beef is affected more by other causes than the condition of the corn crop. The corn belt no longer supplies the demand for beef. The cattle ranches of the west, where pasture is depended upon to make beef, is one cause of change. The other is the methods of the combination known as the "big four." They really control the price of beef cattle at present. They have forced nearly all their competitors to the wall, and cattle-growers must accept their terms or keep their cattle. They are doing more to depress the price of cattle at present than all the big corn crops of last season and this one. You can grow your cattle on corn or grass, just as you please, and when they reach the market the "big four" will place their own value on them, through the help of the courts and legislatures.

PREVENTION OF POTATO ROT.

In the September issue of the *Journal of Mycology*, published quarterly by the section of Vegetable Pathology of the U. S. Department of Agriculture, Mr. Clarence M. Weed, of the Ohio Experiment Station, summarizes a series of experiments on prevention of potato rot (*Phytophthora*) by use of the Bordeaux mixture. This he sprayed upon the foliage four times during the growing season.—May 28, June 26, June 20, and July 16.

Four varieties were treated and the rot was sufficiently prevalent to make the experiment decisive. The blight appeared in the experiment field about the middle of June and did serious damage for the next six weeks. The sprayed vines showed much less injury, remaining green after the others were dead, while at harvest the difference in the yield of tubers was enough to many times cover the cost of treatment. In brief, the total treated area yields 320 pounds seven ounces of tubers three-fourths of which were marketable size, while a similar untreated area produced only 274 pounds four ounces, about three-fifths of which were marketable. This is equivalent to a difference per acre of 62.3 bushels in favor of the treatment.

"For sandy soil I would sow one-third timothy and two-thirds clover, after the grain has been drilled or harrowed in, and roll the grass seed in without harrowing. Use what manure you have for top dressing, the east ground each year before seeding."

"The peat ground having been plowed in the fall, draw the manure which is well rotted on the plowed ground, and deposit in heaps in the fall to be spread in the spring before cultivating for oats."

"I have had experience and am prejudiced in favor of light soil farming. It costs no more to keep up than heavy soil. We have a hardpan subsoil to our light soils, two feet down, when the roots can reach clay. Turn under clover, and keep stock to make barnyard manure."

"Winter wheat does not ordinarily succeed with us unless in sheltered spots. Peas following the vine will prepare the ground perfectly. Peas yield 25 bushels per acre. We use them to feed stock after grinding or soaking. Without this they make the animal's teeth sore. We use them for horses with oats, pound for pound, in place of corn. Potatoes are the best first crop for new ground; they are apt to be scabby on older ground; the result of excessive manure."

The second annual fair of the Detroit International Fair and Exposition Association will be held in this city August 26th to September 5th, 1890. Particulars can be learned by addressing E. W. Cottrell, Secretary, Detroit, Mich.

Lansing Republican: The \$10,000 mortgage on the Central Michigan Agricultural Society's grounds has been paid, and the State Fair grounds are unencumbered.

FARMING LIGHT SOILS.

IMPROVED STOCK FOR FARMERS.

A Paper Read before the Pomona Grange, at Sand Beach, Sault Ste. Marie, by H. A. Brown.

In the battle of "breeds" it is not yet decided which is better for you, and probably it never will be. Each has scored a victory under circumstances suitable to itself, being better understood by their supervisor and feed more accessible sometimes than at others, each in turn has gained an advantage. Any of the pure breeds will return margin of profit if properly handled. Some farmers may, from lack of means, go by the "thoroughbred," but it is within the province of every one to improve. I consider this to be one of the most important interests that can engage the pen of the writer or the tongue of the orator.

We are living in an age when skilled competition meets us on every hand, and we must keep in the advance march with improved methods, or submit to be merely "hewers of wood and drawers of water" to those who will.

Two years ago a certain captain in the employ of the Astor invested in a chronometer compass that enabled his ship to reach port a few days earlier than had been customary. When the bill was presented to Mr. Astor for payment it was rejected, and the captain went with the bill. Another house engaged the captain and bought the improvement. In due course the captain arrived with his cargo, a few days earlier than Mr. Astor's ship. The cargo was readily bought at high figures, and handsome profits were realized. As the late ships were unloading their cargoes the principal merchants had been supplied, and prices had gone down. Mr. Astor chanced to meet his old captain and asked: "How much did that instrument cost you?" "\$300," was the reply; and with a taunting look said, "how much did it cost me?" "As many thousands," replied Mr. Astor. Likewise does the average farmer refuse the mainspring of his profits; he refuses to improve his flocks and herds on account of a small outlay at first; and only recognizes the fact when his more thrifty neighbors have sold out their stock at handsome profits, and his own "scrubs" remain at home, or go begging a buyer at a loss.

Evidence of needed improvement meet us at every side. As we observe the farm teams that pass our door, we behold but one in fifty that is suited for the purpose. The carriage horses appear to be replenished from the dray cart and race track, and the track horses by a common expression are dunces; some of them seem to resemble a clothes rack than a thing of beauty. When racing stock the success depends more on your knowledge of what constitutes a good specimen in its breed, than on the amount you may have paid for it.

If a man is a good judge of the stock he breeds, he will seldom breed or own a poor one. And the first improvement I would suggest is to post yourself, get a thorough knowledge of what are called good points, and when a bad point gets into a herd weed it out, or counteract it by being careful to overbalance it with fresh blood, extra good in that particular.

"Divide your farm into fields. Begin the first year by planting field No. 1 to peas; No. 1 with oats; No. 2 with barley or spring wheat; field No. 4, meadow; field No. 5, pasture, with a piece of new ground for potatoes and rutabagas. The first year No. 3 should be seeded down, fall plow No. 1, turn cattle into No. 4 three or four weeks after haying.

The second year plant field No. 5 with peas, No. 1 with oats; field No. 3, barley or spring wheat; use No. 3 for meadow, No. 4 for pasture; fall plow No. 4 and seed down No. 3, and so on, unless you choose to mow one field two years instead of one. The sod ground that is fall plowed should not be pastured so close but that a good coat of clover can be turned down.

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In a new country like this I am satisfied that variety in farming pays better than specialties, but I have always held that to be eminently successful you must have a special knowledge of every variety. From variety we have better opportunities, so that if one fails we have another to fall back on.

The most important of those I believe is the yield of tubers was enough to many times cover the cost of treatment. In brief, the total treated area yields 320 pounds seven ounces of tubers three-fourths of which were marketable size, while a similar untreated area produced only 274 pounds four ounces, about three-fifths of which were marketable. This is equivalent to a difference per acre of 62.3 bushels in favor of the treatment.

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though the richest in butter fats, yet by no means give the greatest quantity of milk. Instances could be quoted where this cross breeding has resulted in something nearer the farmer's general purpose cow than anything yet heard of.

As far as I have been able to determine on the different breeds, they result somewhat like the following: Thirteen pounds of Jersey milk make one pound of butter, 17 of the Alderney, 17½ of Guernsey, 20 of the Ayrshire, 23 of Irish grade natives, 24 of Durham, 26 of Galloway and Angus, 28 of Herefords, and 32 of Holstein-Friesian. The cream rises in shorter time from the Jerseys after being milked, and longest from the Holstein-Friesians. I have known butter factories refuse thoroughbred Holstein-Friesian milk, and claim that they could not afford to wait "for the rise in cream," and return the milk to its owners.

The ratio of butter fats given above will, in different hands, differ according to feeds given. When oil cake, corn meal and good clover hay is fed there will not only be a larger flow of milk, but it will carry more pounds of butter than if the animal be fed on wheat straw and sheltered on the lee side of a rail fence during a week's storm from the northwest.

Milk cows are very susceptible to their surroundings, and will produce abundantly if liberally fed and kept warm, clean and healthy, with a free access to pure water. And any and all fermenting substances should be kept at proper distance from the milk stable and dairy cellar. Don't expect to make gilt edge butter from impure feed, stagnant water, ill-ventilated stables, filthy quarters to lie in, the cows milked with odorous hands and in sour pails, set in unsanitary pens and cisterns in the same church where the buttermilk had remained from the previous churning, with rough salt rubbed in to kill the rancid flavor; nor can you expect a gilt-edge price. No, that is not the way to produce a prime article and get rich on the proceeds. The cow is only a machine to manufacture coarse grains, hay and straw into pure gold.

An Agricultural Bulletin on Cheese.

Chess is a subject that farmers take a deep interest in, and any information regarding it is invariably read thoughtfully. Of late a number of inquiries have been sent to the Ontario Agricultural College, Guelph, seeking information on the subject, and in reply to them Mr. J. H. Pantin, professor of natural history and geology, has issued a bulletin, giving the results of his researches.

Prof. Pantin not only ridicules the idea that chess is degenerated wheat, but asks in the most logical way how it is, if wheat under certain conditions develops into chess, that chess cannot be grown at pleasure from wheat, no difficulty being experienced in reproducing chess from its own seed? Again, he asks, if wheat degenerates into chess under unfavorable surroundings, why should not the chess return to wheat if those surroundings were replaced by others favorable to wheat?

Botanists classify chess in the bromus family, while wheat belongs to the triticum species. Couch grass, of the triticum family, comes much nearer to wheat in its character than chess does, and yet no one ever hints that it is derived from wheat. If chess is degenerated wheat, the professor thinks we might reasonably expect some resemblance to the plant from which it is derived.

Chess, the professor tells us, will mature seeds under adverse conditions, though the plant be only two or three inches high; while if surroundings are favorable it grows three or four feet high before seed is matured. This may account for its never being seen in good crops, while it may be seen in the sprouting of seed, or in the seedling raised in the garden. In this hardy annual, the difference between the present trade structure and the system proposed is, the one tends to the minimum price that a food supply can be obtained without checking production, while the other seeks the maximum price that a food supply can be sold for without diminishing consumption.

Prof. Pantin asks, "What will you do with the farmers who are in debt and cannot hold their crops?" This proposed system does not require farmers to hold their crops, only to hold their surplus, which in wheat amounts to the inconsiderable sum of one-twelfth of the crop raised in this country, but enough, when thrown upon the market, to ruin the price of the whole crop. To illustrate, suppose a farmer has 100 bushels of wheat, one-twelfth or fifty bushels is the surplus we ask him to hold; this, when sold, will enable him to sell the 550 bushels of wheat, for which there would be a legitimate home demand, and realize almost as much again money as he could now by placing his whole crop upon the market.

It is the business of our statistician, from reports direct from farmers, to estimate the surplus of wheat and the amount of surplus which each farmer may have in his granary or on his farm, and which he would be notified to hold off the market. As it is now, incorrect and exaggerated reports of our crops are sent out and manipulated in the interest of speculators and buyers, and they know that without concert of action among farmers to hold the surplus that it will be thrown without control upon the market, and the result is one crop, year after year, which is sacrificed and finding little demand.

Europe demands the surplus of wheat of all exporting countries, and must have it to bread their population.

The annual shortage in the production of wheat supply in the countries of Europe is about 230,000,000 bushels. To make up this shortage and to furnish an adequate supply of bread for her people, Europe must import wheat from India, Russia, France, and the United States, the latter furnishing 25 per cent, or about 60,000,000 bushels, and owing to the short crop of India and Russia, will be called upon to furnish this year about 120,000,000 bushels.

The proposition submitted to this convention is to fix the minimum price that wheat shall be sold for on the Chicago market, to which all wheat produced in the country of transportation, and to establish a free trade center of the Mississippi Valley. Advise farmers not to sell for less, and to corner this surplus of 120,000,000 bushels of wheat in our granaries and on our farms, and to notify *Mark Lane* that it will not be sent forward unless there is a price offered that will justify exportation.

The Argentine wools are mostly of the long, coarse, carpet kind, not grown in this country, and which grade nearly as high as our best domestic wools, and used to replace

few seeds scattered among wheat do not seem to amount to much in the heap, but if they were taken out we would be surprised at the quantity mixed among the grain.

PROFOUND IGNORANCE.

A Lawyer Tells what he Knows About Wool, and Proves that he is Entirely ignorant About It.

Congressman B. F. Cutcheon, who is a pronounced protectionist, is reported by the Grand Rapids *Democrat* to have uttered the following remarkable ideas:

"In wool we desire a compromise. American wool is coarse and long and more suitable for carpets than clothing. It will not compete strongly with our northern states at which a food product is on the free list. I would favor putting it on the free list for a minute because of 'Our Hatch,' and he was as much surprised as anybody. He believed that fairly high prices more grain could be sold than at low prices. There was no foundation for the cry about over-production. In five years, while the production of wheat decreased 3½ per cent, the price decreased 28 per cent. The speaker then went on to show that there had been no over-production in other countries.

President Colman then addressed the convention from a free trade standpoint.

He denounced the way the farmers are used by the present administration and the protective policy, and said that the only way to protect their interest was to adopt free trade.

He assailed elevator combines, pools, commission men and speculators as rovers of the farmers, and said that between these factions the farmer was crushed. After these speeches were applauded, Lindblom by the protectionists and Colman by the free traders, the committee on resolutions presented the following:

1. That we hereby memorialize our national Congress and the President of the United States, and most seriously petition them to make such reciprocity treaties with their foreign nations to whom we ship our surplus food products, will come to foreign nations to remove the customs duties from our farm products shipped abroad, thereby causing us to receive a higher price for our farm products shipped abroad and stocky fixing a higher price upon that we sell at home.

2. That we ask that such steps be taken by our government as will destroy the present existing monopoly and trusts and trusts and prevent the formation of others.

3. And to the end that we may get our farming implements at a less price, that the present laws be repealed that place a duty upon farming implements or the raw materials used in their manufacture.

4. That we are more deeply interested in the carrying out of the above resolutions than we are in the success of any political party.

A very animated debate followed, which was decidedly political in character. The free-traders greatly outnumbered the protectionists, and the resolutions were finally adopted by a large majority.

It is said that an attempt will be

The Horse.**SAME OLD STORY.**

Palo Alto, by Electoneer, dam Dame Winnie by the thoroughbred race horse Plantet, trotted at Stockton, California, in the 2:20 class, winning the race in three straight heats in 2:16½, 2:17½, 2:13½. He is now behind M. V. C. (Cochran's second), who has the same record, and except Axtell, he equals the record of Palino. We know that Senator Stanford is greatly elated at the high speed made by Palo Alto. He has a theory that the fastest trotter will be from a thoroughbred dam, that the high form and the muscular and lung development of the thoroughbred are necessary to sustain the great speed of the fastest trotter. Great pains and patience have been taken to develop Palo Alto upon this theory. But there is no Electoneer prepotent enough to control the motion of the thoroughbred, and this is the only instance in which even he has been able to get a trotter out of a thoroughbred dam that could beat 2:30.—*Rural Home*.

So Electoneer is the only trotting stallion "prepotent enough to control the action of the thoroughbred." Then Englewood (an thoroughbred) must have been "prepotent" also, for he got Lady Suffolk out a dam by the thoroughbred horse Don Quixote, a son of Imp. Messenger. And where will you get a gainer or better trotter than Lady Suffolk was? Mambrino Chief, by a thoroughbred horse, got Lady Thaorn out of a thoroughbred mare by Gano, a son of American Edge. It's also got out of the same mare Mambrino Patchen, who was therefore three-quarters thoroughbred, the sire of 14 in the list, and of 21 horses who have produced 250 horses, and of 24 dams who have produced in the list, including the great Axtell 2:13; G. W. Wilkes 2:15½; Hurst 2:19 (at 4 years). Lots of thoroughbred blood there, and it did not require Electoneer to control it either to make game and fast trotters. All the sensational trotters of this season are full of running blood, and there would be little left of any of them if it were all eliminated.

SOME INQUIRIES ANSWERED.

To the Editor of the Michigan Farmer.

I noticed in your last issue the pedigree of Axtell is given as by William L., dam Lou by Mambrino Bay, second dam (said to be) by Mambrino Royal. Now is this all of his pedigree on the dam's side? And does the said-to-be mean that the breeding of his second dam is done? Is nothing known about his third dam?

How many of his get has Duke of Crawford 3037 in the 2:30 list? And what are their names and time made? How many have Goldenbow and Louis Napoleon respectively in the 2:30 list.

If other or foreign blood is being introduced into the Percheron race of horses, as your Paris correspondent says, will you please explain how the register is worked? I notice all imported Percherons are numbered in the French book, and breeding given. Do you think the French Stud Book is a fraud, and the registering there a farce? What about the Scotch and English Stud Books? Or, to come nearer home, do you think our American Trotting Register can be depended on as correct? INQUIRER

DATARIO, Mich.

What we published is all the pedigree of Axtell so far ascertained. His second dam, Bird Mitchell, believed to have been sired by Mambrino Royal, and many give this as a fact in publishing Axtell's pedigree; but the Trotting Register says it is in doubt. Noting has yet been published which gives any suggestion as to breeding of his third dam.

Duke of Crawford 3037, by Satellite 2500, dam Roy, by Sterling's Eclipse, has not as yet any produce in the 2:30 list.

Goldenbow 2438, by Satellite 2500, dam Romper, by Volunteer 55, has three trotters and one pacer in the list. They are as follows: Golden Girl, 2:35½; Jim Fuller, 2:36½; Octavia, 2:31½; Golden Prince, pacer, 2:35½.

Louis Napoleon 207, by Volunteer 55, dam Hattie Wood by Harry Clay 45, has seven in this list, one a pacer, namely: Charles Hilton, 2:17½; Jerome Eddy, 2:16½; Louis R., 2:36½; Myrtle, 2:33½; Reno D'fance, 2:39%; Spinelia, 2:31½; Benson H., pacer, 2:37.

Also sire of Frank Noble who has one in the list, Harry Noble, and sire of the dams of Cora Belle, 2:39%; Kate Rowell, 2:39%; Culmes E., pacer, 2:17%; Woodmont, pacer, 2:32%.

The report of our Paris correspondent on the horses at the Paris Exposition can be relied upon. He is well posted on the various breeds of French horses, and knows what he is writing about. The French Percheron Stud Book was only begun a few years ago. Up to that time French breeders only looked after the breeding of the stallions they used, and can therefore give four or five of the sires in a pedigree, and perhaps two or three of the mares. There the pedigree ends, and anything beyond depends upon the memory of the breeder, and sometimes upon the anxiety to have his horse bring a good price. In this respect the French Stud Book is in precisely the same position as the American Trotting Register, as for years the breeders of trotters did not have a Register in which they could record the breeding of their animals. The first volume of the Register was issued in 1871. But the Trotting Register is becoming more valuable every day, because breeders are more careful in preserving the history of their animals. You can be pretty sure that the breeding of an animal recorded in the Trotting Register is correct, but you must not expect the pedigree of a trotting horse to reach back as far as that of the thoroughbred, unless it runs into the latter—which a large proportion of the best trotters do. But there are nearly always missing links on the dams, side beyond which all is mere conjecture.

Hon. M. T. Cole, of Palmyra, Leavenworth Co., read a paper on the culture of our great American cereal at the "corn festival" of the Palmyra Grange. Mr. Cole said:

In most States of our Union corn is the farmer's best crop. How could we get along without it? All kinds of stock are fed of it. It's good for them, too. The stalks, or fodder, are relished by cattle, horses, and sheep, if properly cared for. Excepting in some of the western States, it is an extravagant waste to let corn stand until after husking.

In many of the western States they begin to realize or discover that it pays well to shell their corn before husking. Those western cattle will rejoice and smile, if possible, when their stomachs are well filled with good corn fodder, to assist in protecting them against those blasting storms

improved stock have adhered to a certain line of breeding from generation to generation, and while their animals have not been recorded so as to enable them to be traced back many crosses, except in the case of the thoroughbred horse and Shorthorn cattle, their system of breeding makes it certain that beyond their published records the animals were bred in the same line and to the same type as at present. While draft horse stud books are not all they should be, they are improving every year, and it is far better to place reliance on them than to trust to the representations of interested individuals as to the breeding of non-recorded animals whose history must remain a complete blank.

Horse Gossip.

At the Woodward Combination Sale F. M. Noble, of Grand Rapids, purchased the bay gelding Luellie L., by Missouri Wilkes, dam by Missouri Clay.

Mr. J. H. LEATHERS of this State, has purchased from B. CURRY, of Lexington, Ky., a yearling filly by Nutwood, dam Mambrino Boy, the sire of Axtell's dam.

POCAHONTAS PRINCE, a stallion owned at Eaton Rapids, this State, won the 2:30 race at Lexington, Ky., last week, taking the second, sixth and seventh heats. Time of his heats, 2:21½, 2:23½, 2:25½.

AMOS & ALFRED PHELPS, of Scio, have sold a span of four-year-old horses, sired by Regal (owned by Phelps & Ball), of Dexter to a Philadelphia party for \$600. This shows how well it pays to raise good stock.—*An Arbor Courier*.

ANNIE DICKINSON, the three-year-old filly purchased in this State by C. Williams, the breeder of Axtell, this season, and has since trekked in a race in 2:19½, was sired by Lums 322, a son of George Wilkes, and her dam was by George Wilkes. She cost Mr. Williams \$1,200, but she was worth three times that amount.

The editor of the Kentucky Live Stock Journal is responsible for the following description of Axtell:

"He is said to be stable to take a look at Axtell, and cannot confess we cannot, upon examination, say where he has got his wonderful spirit and action. He is a plain bay colt, nothing striking about him. He has a plain head, with a star and slight blaze, a set on neck, a short, strong, shank-drawn, and middle nicely, with sound feet and legs. His hoofs are curvy looking, but seem to improve with age."

FLORIDA 432, by Hambletonian 10, dam by Volunteer 55, son of Hambletonian 10, is coming to the front as a sire. A daughter of his, Fortuna, out of a dam by George Wilkes, the three-year-old stakes at Lexington very easily, the best time being 2:23. Fortuna has about as much of the blood of Hambletonian as any animal on the track, and three direct crosses through sire, dam and granddam has not hurt her ability to trot fast. Frenzy, another filly by Florida, was second in the two-year-old stakes.

In the 2:30 race at Lexington, Ky., last week two Michigan horses were entered, namely: Midway, by Hay Middleton, dam by F. S. Mambrino Chief, and Belle Rene, by Tremont, dam by George Wilkes. S. V. heat were trotted. Midway took the fifth heat in 2:19½, was second in the seventh in 2:20½, and third in the sixth in 2:23½, a neck behind the second horse and a head behind the first. The stakes went to Pocahontas Boy. Belle Rene was third in the last heat, which was the best position she got. Twelve horses started, and it was anybody's race till the last heat was trotted.

At Lexington, Ky., on October 14th, Roy Wilkes started in the free-for-all race, his competitors being Pickaway and Bessemer. Roy was the favorite in the betting, as he had a right to be, but lost the two first heats, coming in last each time. Then Roy's backers began to kick, and called the attention of the judges to the manner in which George Robens was driving him. They decided to take Robens out and put in E. Geers to drive the horse. Then Roy took the next three heats straight. The judges took the case under consideration, and finally fined both Robens and the owner of Roy, L. A. Davis, for attempted fraud. It is the opinion of many that they should have been expelled.

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The New England Farmer says that in Reading, Vt., there are 4,000 acres of abandoned farming lands to be bought for \$1 to \$4 per acre. A 200-acre farm in Windham County can be bought, buildings, sugar orchard, and plenty of timber, for less than \$15.

The Farm.

CORN CULTURE.

Hon. M. T. Cole, of Palmyra, Leavenworth Co., read a paper on the culture of our great American cereal at the "corn festival" of the Palmyra Grange. Mr. Cole said:

In most States of our Union corn is the farmer's best crop. How could we get along without it? All kinds of stock are fed of it. It's good for them, too. The stalks, or fodder, are relished by cattle, horses, and sheep, if properly cared for. Excepting in some of the western States, it is an extravagant waste to let corn stand until after husking.

In many of the western States they begin to realize or discover that it pays well to shell their corn before husking. Those western cattle will rejoice and smile, if possible, when their stomachs are well filled with good corn fodder, to assist in protecting them against those blasting storms

of winter. Corn is by no means to be despised as an article for human food. In many ways it can be prepared by the skillful housewife and made very tempting for the table. We don't claim that corn is "King," but it's surely the foremost friend in almost every time of need.

Corn will grow well on most kinds of land, but it does love a dark rich soil. Don't plant low wet land with corn. It won't grow well there, and when it should, it's just where corn will delight to grow.

Soil land, especially a clover soil, plowed five inches deep on its edge in the furrow you will find that five inches is quite deep plowing. I would prefer four inches to six.

Clover manure that accumulates in the barn yards during the winter months, should be drawn out, and thoroughly spread before plowing. I know many farmers save it for their wheat, but I prefer to put it on the corn and potato land. Plow the ground thoroughly before planting. When you think it's about right, go over it once or twice more. You can do it so much easier and nice before planting. For soil I find the disc plow better than the right kind of a tool. You can so thoroughly cut the sod that it looks like a garden. If you have no disc harrow, roll down, and then drag thoroughly. That means several times. Every one suits themselves about planting in hills or drills. You can raise more corn and fodder, though, in drills.

Harrow your ground a few days after planting. Then again just as it is sprouting out of the ground. If your hand is neither too wet nor too dry, harrow the third time, when the corn is about two inches high. You will probably cover up considerably of it, but it will be out again all right the next day. If you harrow after the leaves branch out, care must be taken or you will make serious holes in your crop, either by covering up or tearing out. Cultivate thoroughly until the ears are in silk. Later this is liable to do more injury than good, especially if the season turns dry like this year.

Many farmers in Palmyra have learned by experience that commercial fertilizers are very beneficial to the corn crop. Most of them fertilize in the hill, either just before or right after planting. Care should be taken to cover the fertilizer with earth. This is readily done with the foot.

I drilled eleven acres with Leaming corn this spring. One year ago the ground was manured and planted to potatoes. No coarse manure was used this spring. We used our grain drill, planting the corn four feet apart, that is, the rows. We used "Homestead Superphosphate" at the rate of nearly 220 pounds to the acre, letting the superphosphate fall on the ground, the ground being too wet for seed. This will probably cover up considerably of it, but it will be out again all right the next day. If you harrow after the leaves branch out, care must be taken or you will make serious holes in your crop, either by covering up or tearing out. Cultivate thoroughly until the ears are in silk. Later this is liable to do more injury than good, especially if the season turns dry like this year.

As you are always inviting my readers to give their experience, I thought I would give you a description of my way of making soap when chicks are raised by the "old hen process." I take sugar barrels, and hollowing out a place for the barrel to lie in, then sink the barrel on its side, four inches below the surface. Throw the dirt that has been removed into the barrel, and enough more dry dirt to make the barrel at least one-fourth full. This will make a level dirt floor, and give a great deal larger space to buddy and the chicks. For suds I use laths, cut in two, one end of each piece sharpened and driven into the ground, and the other end nailed to the edge of the barrel. Place the next coop far enough from the first to leave a space of, at least, two feet between the barrels, and the next about the same distance from the second. After placing two or three in a line, cover with three boards, placing the two outside boards on first, and the middle one on last, and over the crack between the other two. These will keep the coops dry and the space between the coops will make a shade for the chicks. The dirt floor makes a dust bath, and keeps the coop from becoming foul. It can be easily removed, and fresh dirt put in, and being in, the barrel always keeps dry, no matter how much rain. This I consider one of the principal advantages. During the month of June, so far, we have had a very great amount of rain, and the ground was soaked most of the time, yet I have lost no chicks in these coops. The sugar barrels cost ten cents each here, being cheaper and better than flour barrels, as they are larger. By covering with the boards they are kept from the direct rays of the sun, and will last easily two seasons, when they may be used for droppings. I have White Wyandottes, eight weeks old, weighing one and a half pounds, and they were raised in these coops.

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Horticultural.

THE OUTLOOK FOR APPLES.

The advance in the price of this fruit has awakened new interest among the farmers of Michigan in their orchards. It has been seldom in the past ten years that the average farm orchard has paid a fair margin to its owner for care, use of land, original cost, etc. But this season very fortunately the situation has changed, and many farmers will receive more for their apple crop than for their wheat. It is fortunate because some crops were very nearly failures this season, and the financial returns from the orchard will go far, in many cases, to make the season a fairly propitious one.

A great many farmers have already disposed of their crop; but some are yet holding, and for their benefit we give what information we can glean of the present condition of the market, and its probable course in the future.

The markets, east and west, are at present filled with the most undesirable fruit—such as early fall varieties which must be disposed of at once, and the windfalls and culps which in ordinary years find their way to their wagons-boxes, six to eight miles, and then sell them for what they can get, are the men that rule prices by throwing these cheap apples on the market. This fixes prices and then it is not so easy to raise them. There seems to be no way of reaching these men. They will not attend fruit growers' meetings, and many of them read few if any papers published in the interest of fruit growing.

N. H. Bangs: I am one of those average farmers. Farmers are not all well posted in growing and handling apples, neither are they regardless of their own interest as to handle their apples in the manner described. Some of them may not be as particular as they should. We have been advised to sell our apples direct to buyers. When buyers learn to pay a fair price for good fruit well handled and delivered in sound condition, perhaps farmers will be quite willing to take more pains and deliver their apples in good condition. The dealer buys your neighbor's apples at low figures because they are in the bad condition mentioned, then tries to force the price down to the same figures for your first-class apples. There is little encouragement for farmers to handle with care.

PEACH ROT AND PEACH BLIGHT.

In the September issue of the *Journal of Mycology* published quarterly by the section of Vegetable Pathology of the U. S. Department of Agriculture, Mr. Erwin F. Smith contributes a paper on "Peach Rot and peach blight," embodying the result of his observations in Michigan, Maryland, Delaware, and other peach growing sections of the United States. The loss from peach rot is often enormous, some years amounting to nearly the entire crop.

During the fall of 1887 specimens were sent to the Burlington, N. J., Fair, weighing respectively 19, 19½, 21 and 23 ounces. They were the largest on exhibition and attracted great admiration and won the highest award of the society, a fine medal.

The Idaho Pear.

The following authentic history of the Idaho pear was obtained from Mrs. Mulkey, who originated the pear, and authentically known beforehand what I am to have. Find a good market and ship only good apples. You will then get best prices.

B. G. Baell agreed with the speaker in manner of picking, but thought September 25 to October 10 the most favorable time for such work. His method for repacking is to place the apples on a table covered with blankets, then sort and repack. I have picked, packed and shipped apples immediately, and have kept them in barrels for some time, then repacked, sometimes heading up and shipping soon; have sometimes kept them several weeks after they had been repacked. I prefer the latter method, I read them when ready to ship. The average farmer is not an adept in handling and selling apples. Such would better sell to shippers direct. They know then exactly what they receive for their trees. This would be in the long run.

J. G. Ramsdell said the farmers that shake off their apples, pick them up without sorting, mix several varieties together, and draw them over a dusty and rough road in their wagons-boxes, six to eight miles, and then sell them for what they can get, are the men that rule prices by throwing these cheap apples on the market. This fixes prices and then it is not so easy to raise them. There seems to be no way of reaching these men. They will not attend fruit growers' meetings, and many of them read few if any papers published in the interest of fruit growing.

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Dr. Smith finds that this fungus also causes a very characteristic blight of the twigs and branches. In rainy seasons this is quite apt to occur, especially if the rotting fruits are allowed to remain upon the tree. He also finds that the fungus lives over winter in the decayed fruits, and in this way is reproduced year after year. In the spring these dry, wrinkled fruits, which have been left upon the earth or still clinging to the branches, swell and soften under the influence of repeated rains, and produce a new crop of spores exactly like those of the previous season. The practical importance of this discovery is very great. Could the blighted twigs and rotted fruits of one season be entirely destroyed the fungus would disappear and rot with it. To more nearly complete this removal of infectious material he made the sawdust will be the succeeding crop. During the growing season the fungus produces innumerable spores and spreads its infection very quickly. For this reason, all rotting peaches should be removed from the trees before picking. They should then be gathered before they drop or are blown off by the wind. It requires some experience and observation to know just when any one variety is ripe and ready to gather. If plucked too soon they will wilt, destroying somewhat the crispness and the flavor of the apple. If left on the tree too long they drop or are blown off, causing loss. Autumn apples come into condition for picking all through the autumn season. Winter apples of different varieties do not all ripen at one time. Some varieties ripen quite early while other varieties should remain on the tree much later. Some varieties will drop off much more readily than others. Apples growing on slender twigs will hang much better than those growing on stout, short limbs. All these points the intelligent grower will understand by careful observation. It should study the habits of each kind of fruit grown by him. When any variety of apples is ripe and ready for gathering, place the fruit in barrels and put them into a dry, cool place and let them remain standing on end until ready for shipping. Then empty them on straw or hay, and sort and repack in same barrels, putting in only perfect apples. Care should be used not to mix varieties. Place only one kind in each barrel and see that they are marked on the head of each barrel with the true name of the variety. In this manner you can first ship or sell the varieties that will not keep a long time, and retain the good keepers later if desired. Care should be used in handling apples, to prevent bruising. The stems should always remain on the apples. Never draw your apples to market loose in the wagon-box. They

should be firm about their roots, and after they are all planted, a layer of half decayed manure should be placed upon the surface as a protection to the roots from frost.—*Horticultural Times, Eng.*

Perennial Vegetables.

Have you a spot in your garden devoted to the perennial vegetable? If not, now is a good time to attend to it. Rubarb, or pie plant, as some prefer to call it, coming early in the spring, at a time when our palates are beginning to tire of the cellar vegetables of the previous season, has a most grateful taste and is welcomed by nearly one. It may be raised so easily that none who can spare the space for two or three hills should be without it. It delights in a deep, rich soil, well dug and constantly kept with slops, stable manure, old leaves spaded in, or any other fertilizer which may be convenient. Throw the soapy water of washing day upon it, and in winter mulch with coarse manure. It will give good stalks for cutting the second year.

The asparagus is another perennial, and though looked upon as a vegetable which involves you in many difficulties in the establishment thereof, I have reason to believe that much of this, like the culture of celery, is a popular error. Fall is by all means the best time to start an asparagus bed, unless the soil be very heavy, damp and undrained, and in the latter case some provision should be made for taking off the surplus moisture at whatever time you plant.—*N. Y. Press.*

Secrets of Viniculture.

Those who are but imperfectly acquainted with the secrets of viniculture have a vague impression that the most potential and necessary thing for a wine-growing country is plenty of sun. That the sun plays an important part there can be no doubt; it is necessary to mature, but the soil is everything. And this is shown in the growth of the grapes producing the various elastics in France. In the Meloc districts the limits of the most famous vineyards are marked with strange arbitrariness. In one place grow the yellow, dotted with russet, the core is exceedingly small, while the thick, creamy white flesh is juicy, tender and yet firm, and the whole with a delightful aromatic fragrance, somewhat suggestive of the quince. Altogether it is a distinct appearing and handsome fruit, the flavor is delicious, sub-acid and spicy. Compared with Kieffer, which is evidently of similar origin, namely, Chinese, it is far superior in quality to that variety. Its season is about one month after the Bartlett; and taking the few specimens sent east this season for a criterion, it is free from decay at the core and a first-class shipping variety."

We should add that the seeds are insignificant and by some it is called seedless, and the flesh has a smoothness and entire freedom from granulations. If it prove blight-proof it will be a treasure.

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Lifting and Planting Roses.

The time has arrived when the gardeners' attention will be drawn to the lifting and planting of roses. There are many readers of this journal who are neither gardeners themselves nor employ professional assistance, and yet have a garden in a right and proper manner, and to secure, if possible, strong bushes. To do this, early preparation is essential to success, to get the soil in good condition by the time they are planted. The disease is due to a parasitic fungus which produces many small gray spots on the discolored surface of the rotting fruit. These tufts consist principally of spore dust, which is carried by animals, washed by rains, or blown about, and causes the rot to develop in sound peaches whenever it falls upon them under proper conditions. The most favorable conditions for the germination of the spores and the rapid spread of the rot are hot and moist weather.

Dr. Smith finds that this fungus also causes a very characteristic blight of the twigs and branches. In rainy seasons this is quite apt to occur, especially if the rotting fruits are allowed to remain upon the tree.

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He calls attention to the fact that the area of arable land in the United States is twenty per cent greater than in China, which supports a population of four hundred million. But we respectfully call attention to the fact that we are not prepared to be "supported" as are two-thirds of China's inhabitants, on rice and rats.

Wheat-growers of the Mississippi Valley assembled in convention at St. Louis on the 22d. W. N. Allen, president of the Farmers' Federation, said in his address: "The power to establish the value of a bushel of American wheat and a barrel of mess pork can control the world." The power of the money-lender controlling power was to be found in the agency of the federation of the farmers of the Mississippi Valley, who it seems constitute a legally chartered company with a capital stock of \$20,000,000.

Claus Spreckels expected to begin trouble for the Sugar Trust this week by starting his own sugar refinery in Philadelphia but the start is postponed until next week. He will produce one million pounds of sugar per day at the first, and by February be ready to double the output; then will he double the plant, and produce four million pounds. Then he will build a refinery in New Orleans to produce two million pounds daily, and thus manufacture three-fourths as much sugar as the Trust or six million pounds to the Trust's 12 million. The sugar produced will be sold at a lower price, and it will be more consequence of the Spreckels operation than because a few hundred individuals have decided to use one lump instead of two for a cup of coffee.

Foreign.

Charles Bradlaugh, well known political reformer of England, is reported to be on his death bed.

In Pennsylvania, a part of Asiatic Turkey lying between the Euphrates and Tigris rivers, 6,123 persons died of cholera from July 27 to Sept. 26.

Floods in Japan the second week in September drowned 686 people and destroyed thousands of acres of crops. The Japanese Mail says that 1,000 houses have been washed away in that country have been drowned in floods. 50,000 houses submerged or swept away, and 90,000 people deprived of their means of existence. 150,000 acres of crops being washed away.

Some wealthy Hebrews in London are trying to raise funds to send back to Poland and help the Jews taken captive and carried to London during the strife of nations there by the promises of employment at high wages. The strike is over, the foreigners are out of work, and it is supposed the men will be shipped to the United States, the law against the importation of paupers being evaded by entering them via Canada.

Russia is looking into the Turkish outrages in Armenia. Russian agents having been quietly at work securing evidence sufficient to justify an invasion of Armenia to shield the Christians who have been subjected to most revolting cruelties by the Turks and Kurds. The Sultan, alarmed at the threatened interference of his powerful neighbor, has for the first time issued orders to redress the wrongs and cease the attacks.

It is reported that the buying and selling of slaves is openly conducted in the streets of Samarkand, Tashkent, and other Central Asian squares. And it is alleged that a rich firm of English traders furnishes the capital to conduct this atrocious business, and that the largest share of the firm's profits are derived from it. Immense sums of money are purchased by heavy bribes to keep the sumptuous bribe so effectual that no complaint receives the slightest attention.

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REGISTERED PERCHERON
& FRENCH COACH HORSES,
Imported and bred.**

**34 IMPORTED
HORSES**—Being 100 more than were imported and bred this year by any other man or firm in America.

Studs of the Percheron & French.—A number of other buyers made purchases of our imports this year.

THE WINNERS OF 88 PRIZES—At the Great Show of France; and of these 42 FIRST PRIZES; At Universal Exposition, Paris, 1889, 13 FIRST PRIZES.

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ALL STOCK SOLD FULLY GUARANTEED.—Best quality. Terms—Send for catalog. Don't buy without inspecting this greatest and most successful breeding establishment in America.

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FOR SALE.—Registered Jersey Bull, two years old.

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CLYDESDALES And ENGLISH SHIRES.

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Nearly 200 stallions now on hand, including a few choice Suffolks, Hackneys, and Cleveland Bays. Our buying is done in England, where we purchase all end even animals in the stud—suffice to say, guaranteed—use a cannot afford to purchase before seeing our present stock.

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LARGE English Berkshires.

My bears won the highest prizes at the largest fairs in Canada, and at the Tri-State Fair in Toledo, Ohio, in 1888, the grand prize and diploma at the Michigan State Fair. In 1888 we won the first prize in class, and the diploma for best in show. Our stock is the best in the country, and those over first and sweepstakes they were entered for (two firsts and two sweepstakes) were entered for (two firsts and two sweepstakes) in 1889 at the Michigan State Fair. Our hogs were over 500 lbs. weight, and were won the first, second, third and fourth year old sows; first, second and third on yearling sows; first and second on sows under one year; and the diplomas for best in show were won by our stock at the small fairs, but they have won the highest honors at the largest fairs in the world, and they have always won the grand prize at the Michigan State Fair every year since.

M. E. GALBRAITH, Mendon Michigan Farmer writing.

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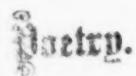
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THE OLD MAN DREAMS.

Oh, for an hour of youthful joy!
Give back my twentieth spring!
I'd rather laugh, a bright-faced boy,
Than reign a gray-haired king!

Off with the spots of wrinkled age!
Away with leering's crown!
Tear out l'le's wisdom-written page
And dash its trophies down.

One moment let my life-blood stream
From boyhood's fount of fame!
Give me o'er, giddy, reeling dream
Of life, all love and fame.

My listening angel heard the prayer,
And, calmly smiling, said:
"If I but touch thy silv. red hair,
Thy health will bathe health."

"But is there nothing in thy track
To bid thee fondly stay,
While the swift seasons hurry back
To find the wished-for day?"

Ah! trust not soul of womankind!
Without thee what were life?
One bliss I cannot leave behind;
I'll take—my—precious—o'er me!"

The angel took a supine pen
And wrote in rainbow dew:
"The man would be a boy again
And be his husband, too!"

"And is there nothing yet unsaid
Before the change appears?
Remember, all their gifts have fled
With those dissolving years?"

"Why, yes; for memory would recall
My fond paternal joys;
I could not bear to leave them all;
I'll take—my—glis—ad boys!"

The smiling angel dropped his pen—
"Why, this will never do;
The man would be a boy again,
And be a father, too!"

And so I laughed—my laughter woke
The household with the noise—
And wrote my dream when morning broke,
To please the gray-haired boys.

—Oliver Wendell Holmes.

I WILL BE WORTHY OF IT.

I may not reach the heights I seek,
My und strength may fail me;
Or, half way up, the mountain peak
Pries tapers may assat me.

But though that place I never gain,
There lies a friendles' joy in this,

I will be worthy of it.

—Edna Wheeler Wilcox.

MISCELLANEOUS.

THE CASE OF ELIZABETH ELLIS
VS. AUNT JILL.

BY MARY S. MC COBB.

"I do not approve of it at all—not at all. This sending a girl to college, as if she was a boy, is flying in the face of Providence. It only turns her into one of those short-haired women, who dress like guys, and are forever prowling round in search of a mission. Let a woman keep at home and not go on a wild goose chase after the 'ologies,' which only play the mischief with her nerves if she gets 'em. Elizabeth will know all she was intended to know when she leaves the seminary, without rushing off to college to get Greek and back-ache. But there! what's the use of my talking. Elizabeth's your girl, John Ellis, and, of course, you'll do as you please!"

John Ellis, at the head of his breakfast-table, was a man who generally did do as he pleased, and in that well-known fact lay his daughter's hope.

"You promised, father!" cried Elizabeth, in perturbation. "Remember that you promised that, if I graduated among the first five at the seminary, I should go to Wellesley."

"You shall, Bess—you shall, my girl. Don't scowl! A woman's 'mission' is to smile. Ah, sister Jill! Where are you in your class, Bess?"

"Second, and going to be first!" answered Elizabeth; and her smile flushed out in a gleam warranted to cheer any father's heart.

"So? That's prime! You shall go to college if I have to sell the house over our heads to pay your way. We never thought that a daughter of ours would turn out a bookworm, did we, mother? Where'd you reckon she picked up her head-piece? She never took it from you, nor from me?"

John Ellis came round to pat his wife's shoulder, and Mrs. Ellis, plump and placid, blinked her white eyelids, remarking that times had changed.

"Girls are treated as if they were boys. At any rate, they can be if they're amind to 'be!'

Mrs. Ellis spoke with a drawl, generously bestowing two-syllable words which were spelled with *o's*. She said "boys" and "mi-and."

She followed her husband into the hall, to interrupt his good-by kiss with the reminder that it was *beef*, not *mitton*, he was to order for dinner.

Aunt Jill, left alone with Elizabeth, seized her opportunity.

"Cousin Maria Buttrick has taken the same silly notion about sending her two girls to college. But I've persuaded her to wait awhile. Just let's see how Bessie turns out," says I. "Mark my words," says I; "She'll come to grief, with her everlasting books," says I!"

"When I do break down, I give you leave to say, 'I told you so,' Aunt Jill."

Elizabeth spoke sharply. She was a little irritable from having been up till one o'clock the night before, by reason of a party at a friend's house. It had been necessary to rise at five A. M. to study geometry. Four hours' sleep is hardly enough to soothe sixteen-year-old nerves.

"You must come," Grace Upton had argued, "for Mademoiselle Legrange, who is

to teach us French, will be there. It is infinitely important to learn how to *parlez-vous!*"

She was a brisk little body, was Grace Upton. Here she was, ringing the Ellis's door-bell, as fresh and smiling as if she had slept the whole night through.

"I must catch you before school," she apologized, "to arrange about the Charade Club. Mademoiselle Legrange has put the finishing touch to our plans. Every other Monday evening we are to set our charades in—French! Think what an advantage. And no one can act like you. Promise that you'll be on hand every single Monday evening."

Elizabeth needed no urging. The notion of belonging to a regular club was in itself enchanting. She would be an important member; that was true. Elizabeth acted as naturally as she breathed. At there was not a boy or a young man in the village blessed with a sign of histronic talent, Elizabeth's tall, slender figure was a boon indeed to the club. A black wig turned her into a brigand; in a curly yellow she was the ideal lover; while adorned with a mop of grizzled horse-hair, she left nothing to be desired in the "stern parent" line.

It was unlucky that the last Thomas concert should come on the very next Monday, since no symphony was perfect to Mr. John Ellis unless his daughter was smuggled close to his elbow. But he was the most unselfish of men.

"Go to your club, Honey," he said, when matters were explained, "but give me your company as far as the station."

"I would if I didn't have to go to the black street," said Elizabeth. "I'm 'cutter' in our Sewing Bee, and I must leave this bundle of work at Mrs. Tyler's. We sew for 'The Homeless Immigrants' Retreat.' It's a lovely charity."

So it was. Mr. John Ellis told himself how proud he was that his girl should be full of kindly care for the unfortunate. He watched his daughter's vigorous young figure as she walked steadily away.

"God bless her," thought the tender heart. "She shall have every advantage that I can give her."

Elizabeth caught up a dish-mop. The water was cold. The soap gave out. Every towel was wringing wet. In desperation Elizabeth tore off her own spotless apron and wiped plates on its dainty embroideries.

At the end of a small eternity, the "Oliver Twists" ceased to demand "more." The sale of fancy articles began. Elizabeth was here, there, everywhere.

"At last we've caught you!" cried Grace Upton. "We've concluded to auction all the cake and the pen-wipers and the tidies and the strawberries and the—everything.

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Elizabeth was at the Charade Club, was Elizabeth. Mrs. Tyler had held her fast by the button of her ulcer to explain a project for a fair, to be given in aid of "The Homeless Immigrants."

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Elizabeth was at the strawberry festival, given by the Sunday-school. After that came a lawn party in honor of Grace Upton's friend from New York.

"And I'll have an afternoon tea for her; that is such a simple way of entertaining," decided Elizabeth.

"No—no!"

"Yes—yes!" contradicted a group of girls.

"You know every man, woman and child in town. Besides, your tongue is hung prettily."

"One might as well sit out of circular saws," exclaimed Elizabeth frantically.

It became necessary to go to the city to buy new ones. More cups would be needed also.

Elizabeth rushed from store to store—upstairs and down into basements—across crowded streets where surging humanity jostled her into alleys, where the sun blazed on the pavements. She could find only eight cups of exactly the size, color and pattern on which she had set her heart. And what should Aunt Jill do, but carelessly break the handle of one of these, when Elizabeth, tired, broiled and with a racking headache returned home with her spoils.

Aunt Jill aplogized, but Elizabeth actually had to lock herself in her chamber, lest she would literally fall upon Aunt Jill in her fury. She had never been in such a frenzy of passion in her life, and though she managed to keep so tight a rein on herself that the anger did not escape, yet the very vitality of her personal ambition than making a good living and sending their sons and daughters out into the world to earn an honorable support generally—unless the one "lad" who takes up the farm when the father grows old or dies—to seek good positions in "service"—the men who are still to be seen market days, especially in southern and western England, wearing smock frocks and broad brimmed hats like the fascinating people in Mr. Hardy's "Casterbridge" stories, and who returning home ward do not disdain to form one of a group of kindred souls about the neath of some tap room, where the news of the day, political and otherwise, is passed around, with comments on and forecasts of the weather, chiefly because of crops, and unfailing reverence for the oldest voice and opinion in their midst. The class of men—and mind—which would have unhesitatingly hung Mrs. Maybrick on one point alone, although convinced that she had not poisoned her husband; for if there is one thing cherished by the working classes of the better kind of England, one virtue guarded, it is the honor of their women; hence their cruel severity to their own sometimes, when, alas, some weak minded girl or some disloyal wife has gone wrong."

Place an English farmer of this class side by side with his fellow worker in America; place the families of each in juxtaposition, and I will venture to say that the contrast would be almost startling. Not one tradition, sentiment or idea would there be in common except the fact that agriculture was their mainstay in life. And as their entire methods in life, the upbringing of their children are widely asunder as the poles, I question whether even questions of the soil would find or make them harmolous. Although the clever American farmer could teach his English brother some shrewdness in work, the latter could assuredly assert himself and his family better off so far as home life, home comforts and the fireside influences are concerned than the ordinary American tenant farmer.

The auctioneer was the "hit" of the evening. Everybody was laughing and bidding. Elizabeth's lively brain worked at high pressure. She rattled off her "Fifty—sixty—give me seven-five!" She made telling paces. She tossed a smile to soft-hearted Farmer Rakes, and sent a bright, particular glance at solemn Deacon Giles which, right through his vest pocket, went into his heart. Out came the purses. In half an hour ten pin-cushions, pie, needle case, dressing-box, strawberry, twin-bag, chicken-skin, "Nancy," Charlotte-russe, darning ball had vanished. Never, within the memory of man, had so much money been taken at a fair. Flushed and panting, Elizabeth descended from her perch, to be embraced and patted and praised by twenty ecstatic girls.

"And you are just the young lady I've been searching for," said Colonel Tyler, resuming her from the twenty pairs of arms.

"You must read the poem before our Grand Army boys, on Memorial Day!"

That Elizabeth knew, would please her father. He had himself been a soldier, and it was only yesterday that he was audibly regretting that the early spring had brought his tulips into bloom too early for use on the 30th of May.

"If he cannot give flowers he can lend his daughter," thought Elizabeth, lovingly.

"Keep the change, Sweetheart," her father had said, when she went to him for a new dictionary.

The "change" was a ten-dollar bill, yet Elizabeth was well aware that money did not grow abundantly on the Ellis family tree.

"I'll make my gown myself, and not ask the precious dear for another penny," she decided. "What did you say about two rolls, Grace? Yes, yes, the waist would be prettier shirred!"

She stood her "History" upon end, and kept the book open with her scissors. She twisted Maria Theresa's celebrated hair with O. N. T., and the account of Napoleon I. became doubly "blasted," by reason of sundry cross-wise bands of muslin.

That she still stood "second" in her class, was very exasperating to our friend. Her rival, patient plodding Persis Strange, was the typical "dull Jack," caring for nothing but her books. Elizabeth, in spite of natural quickness, must work hard to distance her.

Then Elizabeth stood up, straight as an arrow, and recited the poem. Every word thrilled her. Her voice trembled. She clasped her hands tightly together to hold herself steady.

"All with the battle-blood gory
In the dust of eternity meet."

The fierce fight—the horror, the terror, the agony—was all swept before her. And then her pulses beat sharp and quick at the thought of those generous women who had gone forth.

"Lovely laden with flowers,
For the friend and the foe."

Elizabeth walked home as if on air. She was still trembling with emotion. But she walked home to the pros, which so often follows poetry in this work-a-day world.

Thirty pages of geometry to be reviewed before to-morrow.

Never had Elizabeth seen through problems so clearly. It was three o'clock in the morning before she lay down. But there had been no need of the large cup of strong coffee, which she had prepared in a state of exhaustion.

"I depend on you to drag the whole thing through!" gasped the sufferer. "I had best sent for Elizabeth, who found her apparently in a state of exhaustion.

"You must come," Grace Upton had argued, "for Mademoiselle Legrange, who is

teach us French, will be there. It is infinitely important to learn how to *parlez-vous!*"

"Don't be worried. I'll attend to everything," said Elizabeth soothingly.

She went on two hurrying feet to the hall, making the long circuit by Arundel's drug store. She was one of four who had promised to make a choir to sing at the Hospital for Women and Children on the following Sunday. She merely paused at the store door, to say to the dapper young clerk:

"Remember the rehearsal at seven o'clock tomorrow, Joe! We are ruined unless you bring your tenor voice!" and was off in a twinkling.

At the hall, she was beset by a bevy of chattering girls.

"Mrs. Smith promised three loaves of cake, and has sent only two!"

"More letters for the post-office! You must write them, Bess!"

"Bessie, will you arrange these bouquets?"

"And decide how much charlotte-russe shall be sold for ten cents?"

"And ought it to be five or six cents for a chance at the grab-bag, Bessie?"

"And why is it not as ugly to guess how many beans are white and how many black, as it is to raffle?"

It was unlucky that the last Thomas concert should come on the very next Monday, since no symphony was perfect to Mr. John Ellis, unless his daughter was smuggled close to his elbow. But he was the most unselfish of men.

"Go to your club, Honey," he said, when matters were explained, "but give me your company as far as the station."

"I would if I didn't have to go to the black street," said Elizabeth. "I'm 'cutter' in our Sewing Bee, and I must leave this bundle of work at Mrs. Tyler's. We sew for 'The Homeless Immigrants' Retreat.' It's a lovely charity."

So it was. Mr. John Ellis told himself how proud he was that his girl should be full of kindly care for the unfortunate. He watched his daughter's vigorous young figure as she walked steadily away.

"God bless her," thought the tender heart. "She shall have every advantage that I can give her."

Elizabeth needed no urging. The notion of belonging to a regular club was in itself enchanting. She would be an important member; that was true. Elizabeth acted as naturally as she breathed. At there was not a boy or a young man in the village blessed with a sign of histronic talent, Elizabeth's tall, slender figure was a boon indeed to the club. A black wig turned her into a brigand; in a curly yellow she was the ideal lover; while adorned with a mop of grizzled horse-hair, she left nothing to be desired in the "stern parent" line.

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RED ROSES.

Dear me, let me have some awhile,
Lo! we have journeyed many a mile,
That I might see once more
The gray old house where I was born,
And pluck this sunny summer morn,
The rose by the door.

How rich and red they are! How sweet!
Like those fair blooms that used to greet
My wondering, baby gaze;
Like those we so long ago,
At simple feast and country show,
Baker's carless days.

My mother's fingers twined them round,
The clustering roses filled me bound
My father smiled to see
A love well to me, darling mine!
I lost their love in winning thine,
Lost them, finding thee!

It seems, dear heart, but yesterday
We met in lone country way;
And loitered in the lane;
Love stirs its magic hour that noon,
Love set our pulses to a tune
Of mingled joy and pain.

How fair we were to learn the song!
Though all too roughly flown along
The winding path o'er stream;
For you most dear to me on earth
Looked coldly on thy modest worth;
They fed my happy dream.

I found it hard to choose between
These hearts, that all my life had been
So tender and so true,
And thine, as tender, but untried.
To merge the daughter in the bride,
The old love in the new.

I did not fear to count the cost;
They love had paid me all I lost,
Good measure, brimming o'er;
And yet, this, the summer morn,
Through tears, the house where I was born,
The roses by the door.

Ah, love! thy love is like the flowers,
It fills the air with perfume,
With color and perfume;
But if I pull the leaves aside,
I find a briar I would hide,
A thorn among the bloom.

Nay, dearest, do not turn away,
They knewest all my heart would say,
That sometimes it would ache.
Come—where the church-gongs wave,
And thy own on their quiet grave,
Red roses for my sake!

—All the Year Round.

THE GOOD OLD TIMES.

The Festive Cowboy Was Altogether Too Free with His Gun—How the Hope's Popularity Destroyed That of the Pistol.

"I reckon Western Texas and New Mexico in these past days just as dangerous and as hot as Calais and Cetina," said Slap T' other day, as he deposited a handful of "orts" in his nonpareil case and turned round on his stool to join a little group of printers in reminiscences of Western life. "I got tired of type-setting once and turned cowboy down there. But I soon got enough of 'punchin' cows.' It was too blamed wild and woolly for me. But it is different now. The gingers all gone out of that country. The days are past when an enterprising man could go down there with a lariat and a gun and make a fortune in the cattle business for himself. There ain't no room for fellers to become self-made men any more in that business. I reckon you couldn't find half a dozen maverick yearlings now in a round-up of all the ranges in that region. Houser was swinging in a cool, shady place at the lower end of camp.

"That's the way it used to be down there, but it's played out now. You see folks have got to disowning that sort of thing; said a camp that tolerated it was low down in the scale of文明. And every body who sits and says 'oh, why, why, they strung up five fellows at one shake once, and then the savages allowed that the paupers was past and one by one they sneaked away to places where they wasn't known. But quiet, well-behaved people never had any trouble. I was down there two years, and bulletin' a few close calls like gettin' bullets through my head and dropped it on the floor. The three watchers of the impending tragedy were sitting with their feet swinging a foot and a half from the bare, unnumbered floor.

When the rat had first been released it had scampered around the wainscoting, looking for a hole, when the ferret was dropped it squeaking on the floor. From a gun in his lap the ratter, also with his right hand in a leather glove, drew a ferret and dropped it on the floor. The three

had been carried off by their friends. A little later the Baker gang carted their dead folk away and buried them, you wouldn't have known that any thing unusual had happened—the game were all running, the blood had been washed up, and every thing was as peaceful as ever.

"Every one about camp was offering bets of four to one that the fight wouldn't end there, and it didn't, for in less than two weeks after the saloon fracas news reached camp that a battle had taken place out on the range. The fight occurred one afternoon about sundown. Houser's men had gone to camp out on a little creek and began to shoot up horses for a trial. They fought more like a lot of savages than like white men, and didn't seem to care much whether they 'passed' in or not. In all more than five minutes from the time the first shot was fired all was quiet again, and one long shot sat on his horse and looked around him at the dozen of dead men scattered around. It was young Baker, and he wasn't very lucky, for he had a bullet in his shoulder.

"Houser didn't happen to be among the dead. He had been at the main camp all day and was not with his men. Two days later Baker rode into Liberty to get the bullet dug out of his shoulder. Of course he dropped into the Nightcap first for a drink and then into the saloon. He didn't get it though, for Houser was there to receive him. Baker was standing at the bar with a glass of whisky in his paw, when Houser, who was sitting next the seven spot at the faro table, saw him. A couple of seconds later there was a pistol shot and Baker's hand dropped and the glass of whisky fell to the floor. He faced about and attempted to draw a gun with the other hand. But it was no use, for as soon as he turned Houser began to sift the lead into him and he went down all in a heap in front of the man learned in ferrets and rats descended on the minute of his calling.

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"A ferret doesn't often catch a rat in a run, for the rat is fast and the ferret is slow. Sometimes they do catch one, and then it's hard work to get that ferret back. The ferret is a fighter within itself, it can be seen two pairs of small eyes, a brilliant pale blue green. They belonged to two rats, ferrets, I mean. They were the property of an owner of a superior breed.

"Wrapping the box in a piece of paper for appearance's sake, and punching some holes in it for the animal's sake, the ex-professor set out with the reporter for the residence of the friend who had rats in stock. On the way to the theater of experiment the man learned in ferrets and rats descended on the minute of his calling.

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Oct. 26, 1899.

Continued from first page

Wild Rose 5 lb., by Barrington Duke 7th
73667, dam Salvia Aylesby Lady, by
Auric Duke 34540—Aylesby Lady—W. E.
Boyle—Duchess.

Salvia S. b., by Jock 48444, dam Salvia 5th,
by Sir Baron Morley 28557—Rosaleila—J.
Taylor, Wixom.

Salvia 9 h., by Kirkleevington Lad 2d
45393, dam Salvia S. b., by Jock 48444—
Rosaleila—E. Burch, Wixom.

Salvia 10 h., by Barrington Duke 7th
73667, dam Salvia S. b., by Jock 48444—
Rosaleila—W. L. Green, North Farming-
ton.

Salvia Rose 5 lb., by Barrington Duke 7th
73667, dam Salvia Rose 5 lb., by Jock 48444—
Rosaleila—E. Burch, Wixom.

Salvia 10 h., by Barrington Duke 7th
73667, dam Salvia 8th, by Jock 48444—
Rosaleila—W. L. Green, North Farming-
ton.

Salvia Rose 5 lb., by Barrington Duke 7th
73667, dam Salvia Rose 5 lb., by Jock 48444—
Rosaleila—E. Burch, Wixom.

Clara Belle, by Barrington Duke 2d 37635,
dam Alice Alviria 11th, by Hunt's Swan
53207—Henrietta—P. Johnson, Novi-
ville.

Kirkleevington Lad, by 11th Duke of
Kirkleevington 51132—Springfield Wan-
derer—M. Gage, Walled Lake.

BULLS.

3d Barrington Hips, by Barrington Duke
7th 73667, dam Hazeline—Hips—A. Wells,
Rochester.

Wiley Barrington, by Barrington Duke
7th 73667, dam Miss Wiley Herby Her-
bier 4549—Miss Wiley—H. A. Wells, Roch-
ester.

2d Paylis Duke of Barrington, by Bar-
rington Duke 73667, dam 9th Paylis of
Holmshurst by Major Boot 36240—Young
Paylis—E. Rook, Ypsilanti.

Orange Duke, by Barrington Duke 7th
73667, dam Carrie by Imp. Baron Surmis
(45938)—Crockshank—E. Rook, Ypsilanti.

Henrietta Duke, by Barrington Duke 7th
73667, dam Clara Belle by Barrington Duke
2d 37632—Henrietta—H. Holmes, North-
ville.

Mr. Wixom took care of his visitors in
grand style, the sale opening after a regular
banquet had been enjoyed by those present,
and another was served at the close. The
low prices for cattle did not seem to affect
any one's appetite in the least.

The Dairy.

CONDUCTED BY T. D. CURTIS.

Dark Stables.

There is only one legitimate excuse for
dark stables, and that is to get rid of flies.

It is well to have the windows so made that
they can be easily darkened for this purpose.

But the stable ought to be made light and
cheerful, as well as be well ventilated and
airy.

Light is as essential to the health of
all domestic animals as it is to all members
of the human family. No animal can long
be confined in a dark, gloomy stable without
injury to health.

The cow stable should be light, clean and cheerful. It costs but
little to put in windows. If cows are sold,

it should by all means be in such a stable,
as they must have pure air and plenty of
light, in order to maintain health and elaborate
wholesome milk. Morning and even-
ing, at least, they should have a chance to
sun themselves in the open air, in summer,
and to do the same in the middle of winter
days in winter; and while they are out, the
stable should be thrown open and thoroughly
aired and purified as much as time will
permit.

The cows do not so much need the
exercises as they do the open air and broad
daylight. The air-bath is good for both the
cows and their stable.

What to Feed.

The science of feeding both animals and
plants is one of the most important that can
engage the attention of dairymen and stock-
raisers. We condense into this article as
much information on the subject as the
space will permit.

Foods are divided into two classes—nitro-
genous and carbonaceous. The nitrogenous
foods are also known as albuminoïds, and
proteins. They are known as the muscle or
lean meat and milk producing foods. Their
name, nitrogenous, is derived from nitrogen,
of which they contain a comparatively large
but varying proportion. Nitrogen is a color-
less, harmless gas, which constitutes about
four-fifths of our atmosphere, and of course
of the air which we constantly breathe. It
dilutes the oxygen, another gas which con-
stitutes most of the other fifth of our atmos-
phere, and by uniting with other substances
causes combustion, decay, fermentation, and
the purification of our blood by absorbing the
carbon with which it becomes loaded in cir-
culating through the animal system. With-
out such dilution, the oxygen would be too
active and destructive. Nitrogen is nearly
pure in the white of egg. All its chemical
combinations are exceedingly unstable or
easily broken. It is the destructive agent
in all explosive compounds, as nitro-glycer-
ine, gun-cotton, dynamite, gunpowder, etc.
The food substances classed as nitrogenous
are the albumins, glutins, gelatins, fibrins,
caseins, and all the proteins, both animal
and vegetable.

The carbonaceous foods are also known
as carbohydrate, and are classed as fat and
heat producing foods. They are also called
foods of respiration. The term carbonaceous
is derived from carbon, which is the greatly
predominating element in that class of foods.
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but varying proportion. Nitrogen is a color-
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All foods are composed of twelve or fifteen
elementary substances, in greater or less pro-
portions; but it is found by scientific investi-
gation that with a variety of foods, when
nitrogen and carbon are present in the right
proportion, all the other ingredients, as a
rule, are also present in sufficient quantity.

Hence these two ingredients are the only
ones that need to be looked after, and foods
are classed as nitrogenous and carbonaceous.

Of course all foods contain these two simple
substances, but in widely different propor-
tions, the carbon, however, always in excess.

When there are less than 5% parts of
carbon, to one of nitrogen the food is usually
called nitrogenous; but when the proportion
of carbon is greater than this the food is
called carbonaceous. The sum should be to

keep the nitrogen and carbon properly bal-
anced. According to German experiments,
the proportion should one of nitrogen to 5.4
of carbon; but American experimenters find
the proportion of nitrogen, which is the most
difficult and costly element to obtain, larger
than it need be; and Prof. Whitehead has ex-
pressed the opinion that a ration stronger
than seven parts of carbon to one of nitro-
gen will be found so costly as to be unprofit-
able in dairying. If we divide the difference,
we may say the proportion should be one of
nitrogen to six of carbon. As a sort of guide
in proportioning foods, we give a table show-
ing the nutritive ratio of 68 of the most com-
mon stock foods—that is, showing the pro-
portion of carbon to one of nitrogen contained
in each food named:

Skinned milk.....	2.6
Cutter seed cake.....	1.5
Turnip.....	1.7
Rape cake.....	2.2
Malt sprouts.....	2.9
Brewer's grain.....	2.8
Sunflower seed.....	2.8
Pea meal.....	3.0
Huckwheat bran.....	3.8
Coarse wheat bran.....	3.8
Millet.....	5.8
Wheat.....	5.8
Turnip.....	5.8
Deciduous clover.....	5.8
Fodder cabbage.....	5.8
Buckwheat in blossom.....	5.8
Held clover.....	5.8
Red clover, before bloom.....	5.8
Rich pasture grass.....	5.8
Lucerne, before bloom.....	5.8
Red clover in bloom.....	5.8
Blue grass, in bloom.....	5.8
Orchard grass, in bloom.....	5.8
Pumpkins.....	5.8
Buckwheat grain.....	7.8
Corn.....	7.8
Turnip.....	7.8
Deciduous clover.....	7.8
Fodder cabbage.....	7.8
Buckwheat in blossom.....	7.8
Held clover.....	7.8
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